

REMARKS/ARGUMENTS

Reconsideration and allowance of the present application based on the following remarks are respectfully requested. Claims 1 and 11 have been amended. Claims 35-36 have been added. Support for the additions and the amendments may be found throughout the specification. No new matter has been added. Upon entry of the above amendments, claims 1 and 3-36, as amended, will be pending.

Claims 1 and 3-34 have been rejected under 35 U.S.C. § 103(a) as unpatentable over U.S. Patent 4,602,079 to Vinches *et al.* ("Vinches") in view of U.S. Patent 5,840,782 to Limerkens *et al.* ("Limerkens").

With respect to the 35 U.S.C. § 103(a) rejection, the amendments to the claims are believed to address this rejection. In particular, claim 1 has been amended to further clarify that the hydroxy compound used in the context of the present invention is formed from a single polyester formed from a dimer fatty acid and/or dimer fatty diol having a trimer content between 5 and 15 weight percent. Although Vinches notes that "a mixture of one (or more) polyester resin(s)" can be used to form the hydroxy compound (see col. 5, lines 42-44), Vinches in no way suggests (i) using a single polyester to form the hydroxy compound, (ii) specifically using, as the single polyester, a polyester that is formed from dimer fatty acid and/or dimer fatty diol having a trimer content between 5 and 15 wt.%, and (iii) to produce a microcellular polyurethane foam having the unexpectedly superior properties associated with the present invention (e.g., the ability to retain at least 40% of its initial tensile strength after being subjected to hydrolysis for 2 weeks).

These unexpected properties are evidenced, for example, in the following table which sets forth the properties associated with the following two different microcellular polyurethane foams: (i) a microcellular polyurethane foam formed in Example 1 of the pending application from a single polyester formed from a dimer fatty acid and/or dimer fatty diol having a trimer content of approximately 20 wt.% (within Pripol 1017) (designated in the table as "Comparative Composition"), and (ii) a microcellular polyurethane foam formed in Example 2 of the pending application from a single polyester formed from a dimer fatty acid and/or dimer fatty diol having a trimer content of 10 wt.% (designated in the table as "Inventive Composition"):

	Comparative Composition [20 wt.% trimer]	Inventive Composition [10 wt.% trimer]
Density	0.37	0.48
Tensile Strength	33.9	74
Elongation at Break	300%	341%
Tear Strength	2.2	2.5
Hardness	35	46

Note, here, that the Inventive Composition (which is within the scope of the present invention) has unexpectedly higher density, tensile strength, tear strength, and hardness, as well as greater elongation at break, as compared to the Comparative Composition (which is outside of the scope of the present invention).

Vinches discusses:

Polymerized fatty acids, responsible for improving the hydrolysis resistance of urethane elastomers ... can therefore be used in the preparation of a polyester or polyesters forming part of the formulation either of the hydroxy compound or of the prepolymer. They can also be used to prepare at least one polyester forming part of the formulation of the hydroxy compound and, in parallel, to prepare at least one polyester forming part of the formulation of the prepolymer.

(see col. 3, lines 52-60)

Vinches goes on to expressly state at col. 6, lines 38-40 that "several polyester resins can be used together to prepare a given urethane elastomer." (emphasis added). Furthermore, most of Vinches' examples use two polyester resins in forming the hydroxy compounds, and none of Vinches' examples teach using a single polyester having a trimer content between 5 and 15 wt.% for forming the hydroxy compound. In fact, the only examples of Vinches that use a polyester having a trimer content even close to the specified 5-15 wt.% range of the present invention (*i.e.*, Examples 1 and 2, which have 4 wt.% trimer content; and Example 4, which has a 15.5 wt.% trimer content) all use two polyester resins in forming the hydroxy compound. Accordingly, one of ordinary skill in the art reading Vinches would not be

motivated to form the specific hydroxy compounds of the present invention and, therefore, would not and could not form the microcellular polyurethane foams having the improved resistance to hydrolysis of the present invention.


Even if one were to consider, for the sake of argument, combining the teachings of Vinches and Limerkins in the manner suggested by the Examiner, the "resistance to hydrolysis" properties achieved in the present invention could not have been foreseen by one of ordinary skill in the art. In fact, Vinches' elastomeric composition exhibits inferior "resistance to hydrolysis" properties to those exhibited by the microcellular foam of the present invention. Accordingly, it simply could not have been expected that modifying Vinches' elastomeric composition into a microcellular polyurethane foam would have resulted in a vast improvement in the "resistance to hydrolysis" properties of the composition.

Therefore, all objections and rejections having been addressed, it is respectfully submitted that the present application is in condition for allowance and a Notice to that effect is earnestly solicited.

Should any issues remain unresolved, the Examiner is encouraged to contact the undersigned attorney for Applicants at the telephone number indicated below in order to expeditiously resolve any remaining issues.

Respectfully submitted,

JONES DAY

By: 
David M. Mott
Registration No. 47,808
Direct No. (202) 879-3674

Paul L. Sharer
Registration No. 36,004
Direct No. (202) 879-5481

Intellectual Property Group
51 Louisiana Avenue, N.W.
Washington, D.C. 20001
(202) 879-3939 Telephone
(202) 626-1700 Facsimile

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